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Monday, July 25, 2011

**VIA EMAIL**

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW  
Washington, DC 20554

*Re: Ex Parte Presentation of Mayo Clinic in Docket #10-236  
(Promoting Expanded Opportunities for Radio Experimentation  
& Market Trials Under Part 5+).*

Dear Ms. Dortch:

This letter provides notice that on Thursday, July 21, 2011, Dr. Barry Gilbert, Mark Vickberg, Michael Kehoe and Jennifer Mallard of the Mayo Clinic, along with Bruce Mehlman of Mehlman Vogel Castagnetti, met with Julius Knapp, Ira Keltz, Geraldine Matisse and Bruce Romano (by phone) from the Office of Engineering & Technology to discuss Mayo Clinic's recommendations in Docket #10-236 (Promoting Expanded Opportunities for Radio Experimentation & Market Trials Under Part 5+).

Dr. Gilbert and the representatives of the Mayo Clinic introduced themselves and described their technology development and prototyping work on behalf of Mayo Clinic's mission, bringing information and communications technologies (ICT) to bear in support of patients' health care.

Mr. Vickberg then discussed aspects of Mayo Clinic's comments filed in this proceeding, specifically:

- Mayo Clinic believes that medical experimental licenses offer an essential means for proving out emerging technologies that require real-world clinical evaluation, such as body-worn patient monitoring and emergency event alerting.
- Mayo Clinic believes that such clinical trials will need to take place in patients' homes, where doctors can assess their impact, value, challenges and needed improvements for maximum patient benefit. Since a large number of health IT solutions will be worn by patients outside hospitals and specifically in their homes, an Experimental License program excluding in-home use would be of considerably less value to doctors, health technologists and patients.

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- Mayo Clinic believes that such trials will not cause harmful interference to existing commercial or public safety wireless services because (1) body worn monitoring units operate at low power levels to preserve small batteries and (2) emergency event alerts will be extremely rare occurrences requiring extremely brief bursts, with no sustained interference to other services.
- Mayo Clinic believes that the language in the proposed rules allowing experimental licenses for %therapeutic and diagnostic+purposes should be expanded to also include %monitoring and emergency event alerts+as these use cases present important means for ICT to advance health care and help reduce long-term health care costs.

Dr. Gilbert and Mr. Vickberg offered lessons learned from Mayo Clinic's pre-clinical trials already performed in Minnesota, Wisconsin, and Arizona in the 3650 MHz band. Key conclusions include:

- These patient monitoring and emergency event reporting systems will likely require system architectures that rely on transmissions from body-worn devices to local base stations to medical centers. Mayo Clinic has successfully tested these specific technologies and system architectures already in both urban and rural settings.
- On-body monitors can operate successfully under the Part 15 rules, except in those rare instances where a patient falls on top of the monitoring device, shielding the antenna with their body and necessitating higher power outputs to close the communications link.
- Communications between the %atic+base stations and medical centers would optimally occur at low frequency spectrum capable of longer-range transmissions.

Dr. Gilbert additionally discussed other technology development work done by Mayo Clinic's labs over the past 50 years, from assisting in the design of pilots' and astronauts' pressurized flight suits to miniaturized electronics.

Pursuant to the Commission's rules, this letter is submitted for inclusion in the file of the above-referenced proceeding. Please direct any questions concerning this matter to the undersigned.

Respectfully submitted,

Marlene Dortch, Secretary  
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A handwritten signature in black ink, appearing to read 'BM' followed by a long, horizontal, wavy line.

Bruce Mehlman  
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Cc (by email):  
Julius Knapp  
Ira Keltz  
Geraldine Matise  
Bruce Romano